MANAGEMENT UNIT 18 - OQUIRRH-STANSBURY

Boundary Description

Salt Lake, Utah, and Tooele counties - Boundary begins at the junction of I-15 and I-80 in Salt Lake City; south on I-15 to SR-73: west on SR-73 to SR-36; south on SR-36 to the Pony Express road located just south of Faust; west on this road to the Skull Valley-Dugway-Timpie road; north on this road to I-80 at Rowley Junction; east on I-80 to I-15 and beginning point.

Unit Description

This management unit encompasses the Stansbury, Oquirrh and Onaqui Mountains. Big game activity of the unit centers around the Oquirrh Mountains and the Stansbury Mountains with their southern extension. These two mountain ranges are both fairly isolated from surrounding areas and are the only lands suitable as big game habitat.

The summer range for the Oquirrh Mountains is limited to land above the 7,000 to 7,500 foot contour and makes up about 48% of the area classified as suitable habitat for big game. The remainder of the habitat is classified as winter range (48%). During severe winters, the amount of available winter habitat is reduced to almost half this area. This is considered the major management problem for the Oquirrh Mountains. Another major concern is that 63% and 45% of the summer and winter range respectively are under private ownership. This problem is further worsened by the patterns of uses and abuses these lands have been subjected to. This area has a history of heavy grazing (almost year round) by cattle, sheep, wild horses, and occasionally even goats. Although current use is perhaps less intense than in the past, range condition is still on the decline, especially on the winter range.

A concurrent problem, especially on the north end of the Oquirrh Mountains, has been air pollution from the smelter. Pollution has eliminated almost all vegetation within localized drainages. Accumulations of mine tailings in Bingham and Mercur Canyons have covered significant acreages on both summer and winter ranges. Another notable problem in the area is that public access on the private land is greatly restricted, posing further management difficulties. Kennecott Copper Corporation, the largest single land owner, allows very limited hunting access for elk and no access to deer hunting.

In contrast, the Stansbury Mountains summer range is limited to about the 6,800 to 7,000 foot contour where it makes up 45% of the range that has been classified as suitable for big game. The remainder of the habitat is classified as suitable winter range (55%). The proportion of private lands on this big game habitat are respectively 6% and 14% of the summer and winter range. Although the overall winter range condition is generally more satisfactory than that of the Oquirrh Mountains, there is still the ongoing state-wide problem of invasive weeds restricting the reproduction and establishment of browse species.

Study sites were originally established on the unit in 1983. Rereads occurred on some of the sites in 1989, 1990, 1997 and 2002. Several sites were discontinued but text and tables have been retained.

SUMMARY

WILDLIFE MANAGEMENT UNIT 18 - OQUIRRH-STANSBURY

Most of the trend studies on unit 18 were established in 1983. A total of 18 trend studies were established that year. All sites were reread in 1989. In 1990, ten new trend studies were established on Kennocott property to monitor their rehabilitation efforts on deer and elk ranges. During the 1997 field season, a total of 20 of unit 18's trend studies were reread and three additional sites were established. Many of the Kennocott sites were suspended. In 2002, fourteen trend studies were reread on unit 18 and two new studies were established. All of the trend studies read in 2002 sample big game winter range except for one summer range site at Black Rock East (18-20). This study samples a high elevation elk summer range near the top of Black Rock Mountain.

Precipitation is the main driving force for soil, browse, and herbaceous trends. Data from weather stations in unit 18 show above normal precipitation from 1983, when trend studies were originally established, through 1986. A three year dry period followed from 1988 to 1990. Trend studies were reread in 1989 and new sites established in 1990, during this dry period. Another four year period of above average precipitation followed from 1995 to 1998, so rereads in 1997 were during this wet period. Precipitation was slightly below normal (89%) in 1999, normal in 2000, and again below normal in 2002 (86%). Drought conditions in unit 18 were not as severe as seen in other management units in 2002. One similar trend, however, is an extended period of dry springs (March, April, and May). Precipitation was well below normal during the springs of 2000, 2001 and 2002. In addition, the fall period (September, October, and November) of 1999 was also extremely dry with only about 19% of normal precipitation recorded. Dry conditions during the fall and spring period greatly effect grass and forb production, especially annual species. Of the 14 trend studies read in 1997 and reread in 2002, data show four sites increased in sum of nested frequency for perennial grasses. However, one of these sites was East Hickman Canyon which was chained and seeded in 1999. Three sites showed a slight decline in sum of nested frequency for perennial grasses while the other six sites remained stable. Annual grasses displayed a more general downward trend. Cheatgrass declined in sum of nested frequency on six study sites, while two increased slightly and the other 3 sites remained stable. The dry spring periods also had a overall negative effect on forb abundance. Most trend studies showed a decline in the sum of nested frequency for forbs and in the total number of forb species sampled.

Overall trends on unit 18 are stable to improving. The only declining soil trends were slightly downward trends found on three sites, Big Dip Gulch (18-5), Deadman Canyon (18-29), and Hatch Ranch (18-30). Only one study, Manning Canyon (18-3), displayed a slightly downward browse trend. Improving browse trends were found at South Palmer Point (18-23), Salt Mountain (18-26), South of Broons Canyon (18-27), Hatch Ranch (18-30), and East Hickman Canyon (18-32). All other sites were considered stable. Herbaceous trends were down or slightly down at three sites, Salt Mountain (18-26), South of Broons Canyon (18-27), and Carr Fork (18-31). The trend study at East Hickman Canyon (18-32) had upward trends in all categories. This site was established in a thick juniper-pinyon woodland in 1997 which was chained and seeded in 1999.

Many sites in unit 18 displayed a decline in forb abundance in 2002. Average number of forb species sampled per site was estimated at 18 in 1997, dropping to 12 in 2002. Sites which displayed the largest decline in forbs also had high soil temperatures. Of the 16 sites read in 2002, seven studies had soil temperatures that averaged over 60° F at a average depth of nearly one foot (11.7 inches). The average number of forb species sampled on these sites with high soil temperatures, dropped from 20 in 1997 to 10 in 2002. These sites also supported higher cover and nested frequencies of cheatgrass. Most of these sites maintained stable herbaceous trends due to the fact that forbs provided a small portion of their herbaceous understories. Even though many sites showed stable herbaceous trends, the herbaceous understories on many sites are poor and some are dominated by poor value perennial grasses and weeds.

A trend summary of each study is listed below.

SUMMARY

	Category	1983	1990	1997	2002
18-3 Manning Canyon	soil	est	4	4	3
	browse	est	2	4	2
	herbaceous understory	est	3	4	3
	Category	1983	1989	1997	2002
18-5 Big Dip Gulch	soil	est	3	3	2
	browse	est	3	3	3
	herbaceous understory	est	4	1	4
18-6 South of Soldier Canyon	soil	est	4	3	3
	browse	est	3	3	3
	herbaceous understory	est	5	2	3
	Category		1990	1997	2002
18-15 Upper Kessler	soil		est	3	3
	browse		est	NA	NA
	herbaceous understory		est	3	3
18-20 Black Rock East	soil		est	3	3
	browse		est	3	3
	herbaceous understory		est	3	3
	Category	1983	1989	1997	2002
18-23 South of Palmer Point	soil	est	3	4	3
	browse	est	1	5	4
	herbaceous understory	est	4	3	3
18-24 Salt Mountain Stock Pond	soil	est	4	4	3
	browse	est	2	3	3
	herbaceous understory	est	4	4	3

1 = down, 2 = slightly down, 3 = stable, 4 = slightly up, 5 = up, est = established, susp = suspended, NR = not read, NA = not applicable, no trend

	Category	1983	1989	1997	2002
18-25 Below Chokecherry Spring	soil	est	5	5	3
	browse	est	3	5	3
	herbaceous understory	est	4	3	3
18-26 Salt Mountain	soil	est	2	NR	3
	browse	est	2	NR	5
	herbaceous understory	est	4	NR	2
18-27 South of Broons Canyon	soil	est	3	4	3
	browse	est	3	4	4
	herbaceous understory	est	3	3	1
18-29 Deadman Canyon	soil	est	3	4	2
	browse	est	4	3	3
	herbaceous understory	est	3	4	3
18-30 Hatch Ranch	soil	est	3	4	2
	browse	est	3	3	4
	herbaceous understory	est	4	2	3
18-31 Carr Fork	soil			est	5
	browse			est	4
	herbaceous understory			est	2
18-32 East Hickman Canyon	soil			est	5
	browse			est	5
	herbaceous understory			est	5
18-34 Three O' Clock	soil				est
	browse				est
	herbaceous understory				est
18-35 Settlement Canyon Reservoir	soil				est
	browse				est
	herbaceous understory				est

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	Category	1983	1989	1997	2002
SUSPENDED SITES					
18-4 Silverado Canyon	soil	est	4	3	susp
	browse	est	2	4	susp
	herbaceous understory	est	2	3	susp
18-7 Calumet Mine	soil	est	3	4	susp
	browse	est	2	5	susp
	herbaceous understory	est	4	4	susp
18-9 Left Fork Settlement Canyon	soil	est	3	3	susp
	browse	est	3	3	susp
	herbaceous understory	est	5	5	susp
18-10 Bates Canyon	soil	est	5	3	susp
	browse	est	1	4	susp
	herbaceous understory	est	5	4	susp
	Category		1990	1997	2002
18-14 Little Valley	soil		est	5	susp
	browse		est	NA	susp
	herbaceous understory		est	1	susp
18-19 Black Rock West	soil		est	4	susp
	browse		est	3	susp
	herbaceous understory		est	2	susp
18-21 Black Rock Canyon	soil		est	3	susp
	browse		est	3	susp
	herbaceous understory		est	1	susp
18-22 Rodgers Canyon	soil		est	4	susp
	browse		est	1	susp
	herbaceous understory		est	1	susp

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	Category	1983	1989	1997	2002
18-28 Condie Meadows	soil	est	3	4	susp
	browse	est	3	4	susp
	herbaceous understory	est	3	2	susp
	Category			1997	2002
18-33 Clover Creek	soil			est	susp
	browse			est	susp
	herbaceous understory			est	susp

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